




UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,200	01/26/2001	Raul Asia	23600.00501	7179
7590	03/10/2005		EXAMINER KUMAR, PANKAJ	
John W. Carpenter CROSBY, HEAFEY, ROACH & MAY P.O. Box 7936 San Francisco, CA 94120-7936			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/771,200	Applicant(s)  ASIA ET AL.	
	Examiner Pankaj Kumar	Art Unit 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 and 11 is/are allowed.
- 6) ☒ Claim(s) 13-17 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/17/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed 10/13/2004, with respect to the restriction of the claims have been fully considered and are persuasive. A ground of rejection on the elected group is discussed below.
2. Applicant should cancel the unelected claims as this application contains claims drawn to an invention nonelected without traverse in arguments filed 10/13/2004. A complete reply should include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Response to Amendment

Specification

3. The abstract of the disclosure is objected to because it should not contain the title and nor the names of the inventors. Correction is required. See MPEP § 608.01(b).

Drawings

4. The drawings are objected to because elements in figures 1 and 2 are only labeled with numbers. The elements should be labeled with text and numbers for better readability. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be

Art Unit: 2631

labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 8 is objected to because of the following informalities: claim 8 recites “the hub” but as there is no other hub mentioned, it is suggested that it should be changed to ‘a hub’. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima USPN 5,444,736 in view of Federal Standard 1037C, Telecommunications: Glossary of

Telecommunication Terms, <http://www.its.bldrdoc.gov/fs-1037/37search.htm>, herein after standard 1037C. Here is how the reference teaches the claims:

8. As per claim 13: A device for locking onto a downstream frequency, comprising: a radio (Kawashima col. 4 line 47) configured to, receive a plurality of signals (Kawashima fig. 2: receive through antenna 1 many signals over time as the system operates), at least one of said plurality of signals being transmitted on said downstream channel (Kawashima col. 1 lines 20-22: signal received by a receiver; col. 10 lines 42+: reception channel frequency transmitted from a base station; col. 9 lines 43-47; downstream is the direction from transmitter to the receiver), detect a center frequency of said downstream channel (not in Kawashima but would be obvious as explained below), determine an offset of said downstream frequency (Kawashima col. 8 lines 31-32: $+\text{x}\delta f$) compared to a nominal frequency (Kawashima col. 8 lines 31, : compared to no frequency change or 0 from the prior frequency), adjust a frequency so the offset is eliminated (Kawashima col. 1 lines 30-35).

9. Kawashima does not teach to detect a center frequency. Standard 1037C teaches that center frequency is a synonym for carrier frequency. Kawashima discusses carrier wave signal (Kawashima col. 1 line 42) which as a modulated signal has to be demodulated in order for it to be understood. The signal is detected when received for demodulation (Kawashima col. 1 lines 23-30) and the carrier wave inherently has a frequency dubbed carrier frequency and carrier frequency has a glossary definition to be a synonym of center frequency. Also, since Kawashima is detecting the difference between the old frequency and the new frequency as indicated by the frequency change (Kawashima fig. 7), Kawashima is detecting the difference between the old center frequency and the new center frequency and hence it is detecting a center

Art Unit: 2631

frequency. If there is only one channel frequency (Kawashima col. 1 line 21) that a signal is at, then the channel frequency is the center frequency of the signal. If the signal is over a wider bandwidth, then the center of that bandwidth is the center frequency of the signal since if the center frequency was not tuned to the center of the bandwidth then the signal would not be clear (like when one tunes to a particular radio station). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to modify the prior art teaching of Kawashima with to detect a center frequency as recited by the instant claims, because Kawashima teaches carrier wave (Kawashima col. 1 line 42) which would lead to a carrier frequency and also Kawashima suggests determining a frequency change (fig. 7) which would involve detecting a center frequency as explained above in the analogous art of controlling the transmission frequency based on the reception frequency (Kawashima: title; col. 1 lines 20-21).

10. As per claim 14: The device according to Claim 13, wherein said radio is further configured to transmit an instruction to a transmitting device (Kawashima col. 1 lines 30-35: the detected frequency change is transmitted to a synthesizer which changes the transmission frequency; fig. 3a: output of 41 to 54) to adjust, corresponding to said offset (Kawashima col. 8 lines 31-32), a frequency on which said downstream channel is being broadcast (Kawashima: col. 1 lines 32-35; col. 10 lines 54-66).

11. As per claim 15: The device according to Claim 13, wherein the frequency adjusted is an output frequency of a frequency generator used by a receiver device of said radio (Kawashima col. 1 line 17, 32-35).

12. As per claim 16: The device according to Claim 15, wherein said frequency generator is a PLL of said receiver (Kawashima col. 10 lines 63-68).

Art Unit: 2631

13. As per claim 17: The device according to Claim 13, wherein said radio is part of a wireless modem (Kawashima col. 5 line 33: modem, col. 1 line 18: mobile/portable) in a broadband wireless access system. Kawashima does not teach broadband wireless access system. The office takes official notice that one would want high bandwidth and thus broadband communication so the communication is faster. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to modify the prior art teaching of Kawashima with broadband wireless access system as recited by the instant claims, because Kawashima suggests high speed (Kawashima col. 2 line 22) in the analogous art of controlling the transmission frequency based on the reception frequency (Kawashima: title; col. 1 lines 20-21).

Allowable Subject Matter

14. Claims 1-7, 11 are allowed.

15. Claim 8 would be allowed if rewritten to overcome the objection cited in this action.

16. The following is a statement of reasons for the indication of allowable subject matter:

The art of record does not suggest the respective claim combinations together and nor would the respective claim combinations be obvious with: determining, at the wireless modem, if the radio is locked onto the at least one downstream signal received at the radio; if the radio is locked onto the downstream signal, determining a center frequency of a detected frequency range corresponding to the downstream signal; if the radio is not locked onto the downstream data signal, changing a receiving frequency of the radio by signals from the wireless user device

Art Unit: 2631

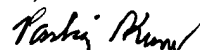
according to a predetermined frequency plan until the receiver is locked onto the one downstream signal and then determining the center frequency of the detected frequency range.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The examiner can normally be reached on Mon, Tues, Thurs and Fri after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pankaj Kumar
Patent Examiner
Art Unit 2631

PK